Two new clearwing moths of the subfamily Tinthiinae from Brazil (Lepidoptera: Sesiidae)

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Abstract: Two new species of the genus *Sophona* WALKER, 1856, *S.* ***pedipennula*** **sp. n.** and *S.* ***piperi*** **sp. n.**, are described from Brazil, Para, Salobo, Vila Carajas, attracted at artificial pheromone lures. The holotypes (and only specimens known) will be deposited in the Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.

Zwei neue Glasflügler der Subfamilie Tinthiinae aus Brasilien (Lepidoptera: Sesiidae)

Zusammenfassung: Zwei neue Arten der Gattung *Sophona* WALKER, 1856, *S.* ***pedipennula*** **sp. n.** und *S.* ***piperi*** **sp. n.**, werden aus Brasilien, Para, Salobo, Vila Carajas, beschrieben, angelockt mit künstlichen Sexualpheromonen. Die Holotypen (und einzig bekannten Exemplare) werden in das Museum für Naturkunde der Humboldt-Universität, Berlin, gelangen.

The clearwing moths of the subfamily Tinthiinae from the Western Hemisphere comprising North, Central and South America were recently reviewed by EICHLIN (1986). He listed 1 species of *Pennisetia* DEHNE, 1850, 24 of *Sophona* WALKER, 1856 and 7 of *Zenodoxus* GROTE & ROBINSON, 1868 and predicted the discovery of many new species, especially in America south of the United States. From Brazil only 4 species of *Sophona* have hitherto been known (EICHLIN 1986). Here we describe two new species of this genus, which were collected in Brazil in traps using artificial pheromone lures.

The following abbreviations have been used:

ETA External Transparent Area of forewing;

ATA Anterior Transparent Area of forewing;

PTA Posterior Transparent Area of forewing.

Sophona pedipennula sp. n. (Figs. 1a–d)

Holotypus: ♂, "Brasilia, Para, Salobo, Vila Carajas, 26.-28. III. 1997, PhF., leg. PIPER" (in coll. H. G. RIEFENSTAHL, will later be deposited in Museum für Naturkunde der Humboldt-Universität, Berlin, Germany). – No paratypes.

Description

♂ (holotype, Fig. 1a). Alar expanse: 14.5 mm; body 5.5 mm; forewing: 6.5 mm; antenna 3 mm.

Head: frons creamy-white; labial palps pale yellow; antenna bipectinate. Thorax: dark shining leaden-grey; patagia black; tegulae black, orange-yellow apically; with an orange yellow scapular spot. Legs: orange yellow dorsally with tufted scales, mixed with black; fore coxa dark leaden-grey with a yellow exterior margin; hindlegs orange yellow ventrally; hind femur at spurs with tufted yellow scales dorsally; hind tarsus black, dorsally with tufts of single very long feather-like scales; hind femur leaden grey; hind coxa yellow. Abdomen: tergite 1 shining ochreous silvery; tergites 2–4 black, covered with light ochreous brown scales anteriorly, chocolate-brown posteriorly; tergites 5–7 black, 5 with a few brown scales, 7 with a creamy-ochreous posterior margin; anal tuft black, divided into two, yellow dorso-apically; sternites 1–5 creamy-white throughout; sternites 6–7 with broad creamy-white posterior margin. Forewing: veins dark brownish-black, costal and anal margin ochreous-yellow basally; a scaled triangular area at the discal spot, which is blackish brown with some ochreous scales medially and broadened towards the costal margin; ATA narrow but well developed; PTA scaled almost throughout; a triangular ETA between R5 and M3; cell between M3 and Cu1 only partly scaled; fringes blackish brown. Hindwing: entirely transparent, veins blackish brown, towards base ochreous-yellow; fringes blackish brown, yellow in anal area.

Genitalia (Figs. 1b–d). Valva elongate with rounded apex at dorsal costa; aedeagus about twice as long as valva, pointed apically, coecum penis short, vesica before examination conspiciuously extruded; saccus wide and short, slightly pointed apically.

Diagnosis

The new species cannot be confused with any other *Sophona* species known from Brazil. However, it is somewhat similar to *S. gilvifasciatus* EICHLIN,

1986 (from Mexico), *S. ezodda* EICHLIN, 1986, and *S. canzona* EICHLIN, 1986 (both from Panama). *S. gilvifasciatus* can be distinguished by the large ETA, which reaches from costa to anal margin and by the well developed PTA. *S. ezodda* and *S. canzona* can be distinguished by the lack of a developed ATA and details of the colouration (see EICHLIN 1986).

Etymology. The name *pedipennula* derives from the Latin words PES (foot) and PENNULA (small feather) and relates to the long, feather-like scales on the hind leg tarsi.

Sophona piperi sp. n. (Figs. 2a-d)

Holotypus: ♂, "Brasilia, Para, Salobo, Vila Carajas, 26.-28. III. 1997, PhF., leg. PIPER" (in coll. A. KALLIES, will later be deposited in Museum für Naturkunde der Humboldt-Universität, Berlin, Germany). – No paratypes.

Description

♂ (holotype, Fig. 2a). Alar expanse: 14 mm; body 4.9 mm; forewing: 6.5 mm; antenna 3.0 mm.

Head: frons creamy-white; labial palps pale yellow; antenna bipectinate. Thorax: blackish brown, with a small white lateral spot just close to the head. Legs: blackish brown, hind coxa and hind femur whitish basally, hind femur with white scales at ventral margin apically. Abdomen: black, tergite 1 creamy-yellow anteriorly and laterally; sternites 6 and 7 creamy-white medially; anal tuft bright orange-yellow. Forewing: opaque brown almost throughout; ETA between R5 and Cu1 partly covered with scales. Hindwing: entirely transparent, veins blackish brown.

Genitalia (Figs. 2b-d). Valva with rounded apex at ventral costa, aedeagus very long, about three times as long as valva, pointed apically, coecum penis short, saccus wide and short.

Diagnosis

S. piperi sp. n. is somewhat similar to *S. flavizonata* (ZUKOWSKY, 1936) from Brazil and *S. panzona* EICHLIN, 1986 from Panama. From the first it can easily be separated by the markings of the abdomen (tergites 1 and 4-7 with narrow yellow bands) and by the genitalia (apex of valva pointing upwards). From *S. panzona* it can be distinguished by the colour of the abdomen (tergite 2 orange-red, tergites 3-5 pale yellow).

Etymology. The new species is dedicated to Dr. W. PIPER (Hamburg), who collected the holotypes of both species described here.

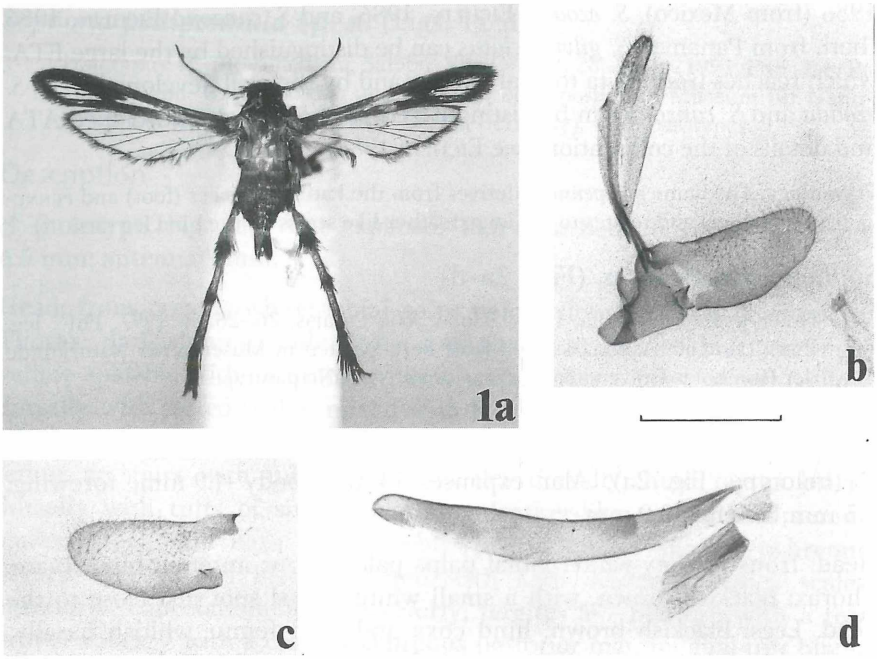

Fig. 1: *Sophona pedipennula* sp. n. **Fig. 1a:** ♂, holotypus. **Fig. 1b:** ♂ genitalia, lateral view, right valva removed. **Fig. 1c:** right valva. **Fig. 1d:** aedeagus.

Bionomics and habitat

The hostplants of the described species are not known. Both species were collected during field research in the Salobo area. The collecting place is located between the small rivers Salobo and Cinzento at an altitude of 170 to 300 m, between 5°40′ and 5°55′ South, and between 50°25′ and 50°40′ West, about 145 km southwest of Maraba in the southeastern Pará State, Brazil. The pheromone traps with a mixture for *Synanthedon myopaeformis* (from BASF) were placed at the edge of a partly disturbed equatorial open rain forest, which shows an expressive number of semidecidual tree species and an important proportion of palm trees, in association with broadleaf evergreen species. The locality is charaterized by small clearings due to selective logging of old trees in the past. This promotes the growth of lianas and other light-dependent plants, which partly dominate the clearings. The climate of the area is characterized as wet

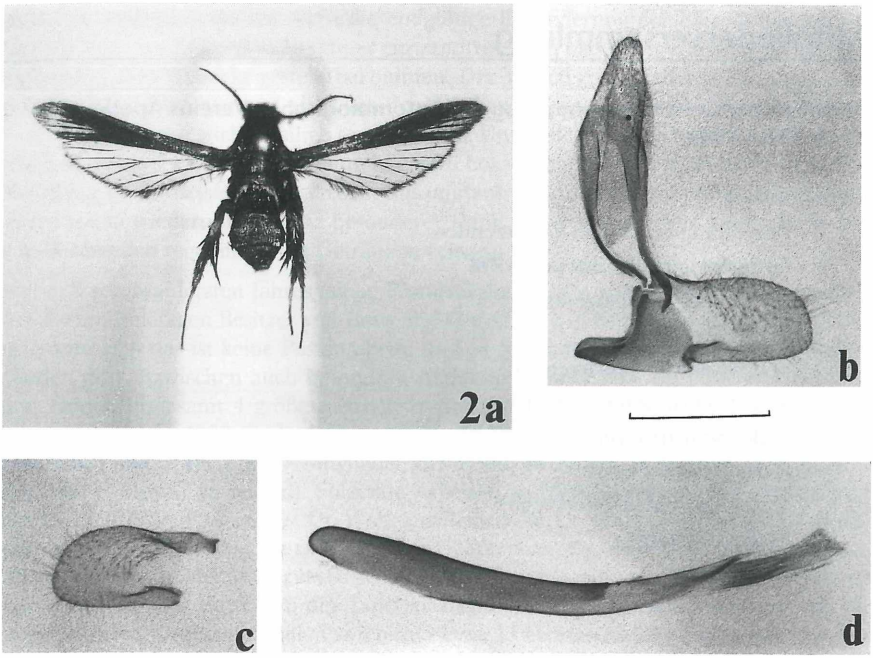

Fig. 2: *Sophona piperi* sp. n. **Fig. 2a:** ♂, holotypus. **Fig. 2b:** ♂ genitalia, lateral view, right valva removed. **Fig. 2c:** right valva. **Fig. 2d:** aedeagus. – Scale bar (for genitalia pictures): 0.5 mm.

tropical monsoon. The average annual temperature varies between 10 and 26° C, the average maximum temperature between 25 and 35° C.

Acknowledgements

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Literature

Eichlin, T. D. (1986): Western hemisphere clearwing moths of the subfamily Tinthiinae (Lepidoptera, Sesiidae). – Entomography 4: 315-378.

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